

## REMARKS/ARGUMENTS

### I. General Remarks and Disposition of the Claims.

Claims 5-20 are pending. Claims 5-7, 10-12 and 20, have been amended. Claims 8 and 13 have been canceled. Applicants respectfully request that the above amendments be entered and further request reconsideration in light of the remarks contained herein.

Applicants reserve their rights to take up prosecution on the claims as originally filed in this or an appropriate continuation, continuation-in-part, or divisional application. Applicants respectfully submit that all the pending claims are in condition for allowance.

### II. Remarks Regarding the Rejections Under 35 U.S.C. § 102(b).

#### A. Rejection of Claims 5-7, 9-12 and 14-20 by Burns

The Examiner has rejected claims 5-7, 9-12 and 14-20 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,690,219 issued to Burns *et al.* (hereinafter “*Burns*”). (Final Office Action at 2.)

With respect to *Burns*, the Examiner states that:

*Burns et al* (note, e.g., col. 1, line 30 - col. 2, line 50; col. 6, line 17 - col. 7, line 25) discloses a process of fracturing and/or treating a subterranean formation, as called for in independent claims 5 and 10, including, in one embodiment, the provision of a well treatment/fracturing fluid comprising a copolymer comprising or including an acrylamide monomer and an “acrylamide copolymer derivative”, such as the “AMPS” monomer, along with an aqueous liquid and carbon dioxide. *Burns et al* (note col. 2, line 64 - col. 3, line 28) further discloses that such well treatment/fracturing fluid utilized by *Burns et al* is deemed a “reduced friction fracturing fluid” and the step of introducing such fracturing/treatment fluid into the well and subterranean formation will necessarily or inherently “reduce the friction” of the well treatment/fracturing fluid, as called for in independent claims 5 and 10.

(Final Office Action at 2.) Applicants respectfully disagree, and submit that the Examiner has not shown that *Burns* discloses every element as recited in Applicants’ claims 5-7, 9-12, and 14-20 as required to anticipate the claims under 35 U.S.C. § 102(b). *Manual of Patent Examining Procedure* § 2131 (hereinafter “MPEP”).

In particular, independent claims 5 and 10, as amended, recite “providing a reduced friction . . . fluid comprising an aqueous liquid, carbon dioxide, and a polymer

consisting essentially of acrylamide and an acrylamide copolymer derivative.” Rather than disclosing the recited friction reducing copolymer, *Burns* discloses copolymers of N-vinyl lactam and an unsaturated amide. (*Burns*, col. 2, ll. 6-13.) For example, *Burns* discloses that “[t]he polymeric viscosifiers are produced from a N-vinyl lactam monomer or mixture thereof and an alpha, beta-unsaturated amide or mixture thereof optionally including one or more additional monomers . . .” (*Burns*, col. 4, ll. 6-9.) *Burns* thus does not disclose or suggest the use of a polymer consisting essentially of acrylamide and an acrylamide copolymer derivative as recited in independent claims 5 and 10. Therefore, *Burns* does not disclose or suggest every limitation of claims 5 and 10.

Accordingly, *Burns* does not anticipate independent claims 5 and 10. Moreover, since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 6-7, 9, 11-12 and 14-20 depend from claims 5 and 10, these dependent claims are allowable for at least the same reasons. See 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of the § 102(b) rejections as to claims 5-7, 9-12, and 14-20 and further request the timely issuance of a Notice of Allowance for these claims.

#### **B. Rejection of Claims 5, 8-10, 13-14 and 17-20 by Sydansk**

The Examiner has rejected claims 5, 8-10, 13-14 and 17-20 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,711,376 issued to Sydansk. (hereinafter “*Sydansk*”). (Final Office Action at 4.)

With respect to *Sydansk*, the Examiner states that:

*Sydansk* (note, e.g., col. 2, lines 6-24; col. 4, lines 5-44; col. 6, lines 1-25) discloses a process of fracturing and/or treating a subterranean formation, as called for in independent claims 5 and 10, including, in one embodiment, the provision of a well treatment/fracturing fluid comprising a copolymer comprising or including an acrylamide monomer and an “acrylamide copolymer derivative”, such as the “a second species” [sic] or “a third species” monomer, along with an aqueous liquid and carbon dioxide. *Sydansk* (note col. 4, lines 5-44) further discloses that such well treatment/fracturing fluid exhibits reduced friction loss “when the fluid is pumped through the wellbore tubulars”. Accordingly, the fracturing fluid utilized by *Sydansk* is deemed a “reduced friction fracturing fluid” and the step of introducing such fracturing/treatment fluid into the well and subterranean formation will necessarily or inherently “reduce the friction” of the well

treatment/fracturing fluid, as called for in independent claims 5 and 10.

(Final Office Action at 4.) Applicants respectfully disagree, and submit that the Examiner has not shown that *Sydansk* discloses every element as recited in Applicants' claims 5, 8-10, 13-14 and 17-20 as required to anticipate the claims under 35 U.S.C. § 102(b). MPEP § 2131.

In particular, independent claims 5 and 10, as amended, recite "providing a reduced friction . . . fluid comprising an aqueous liquid, carbon dioxide, and a polymer consisting essentially of acrylamide and an acrylamide copolymer derivative." Rather than disclosing the recited friction reducing copolymer, *Sydansk* discloses that "[u]seful synthetic polymers include polyacrylamide; partially hydrolyzed polyacrylamide; acrylamide copolymers; acrylamide terpolymers containing acrylamide, a second species, and a third species; tetrapolymers containing acrylamide, acrylate, a third species, and a fourth species." (*Sydansk*, col. 6, ll. 9-14.) *Sydansk* thus does not disclose or suggest the use of a polymer consisting essentially of acrylamide and an acrylamide copolymer derivative as recited in independent claims 5 and 10. Therefore, *Sydansk* does not disclose or suggest every limitation of claims 5 and 10.

Accordingly, *Sydansk* does not anticipate independent claims 5 and 10. Moreover, since "a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers," and since claims 8-9, 13-14 and 17-20 depend from claims 5 and 10, these dependent claims are allowable for at least the same reasons. See 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of the § 102(b) rejections as to claims 5, 8-10, 13-14 and 17-20 and further request the timely issuance of a Notice of Allowance for these claims.

### **III. Remarks Regarding the Rejections Under 35 U.S.C. § 103(a).**

#### **A. Rejection of Claims 6, 7, 11 and 12 over Sydansk**

The Examiner has rejected claims 6, 7, 11 and 12 under 35 U.S.C. 103(a) as being unpatentable over *Sydansk*. (Final Office Action at 5.)

With respect to *Sydansk*, the Examiner states that:

The recited ranges in claims 6, 7, 11 and 12 of acrylamide and "acrylamide copolymer derivative" in the polymer utilized in the fracturing fluid and well treatment fluid of *Sydansk* (col. 6, lines 1-25) are deemed an obvious matter of choice or design in carrying out the fracturing or well treatment process of *Sydansk*

based on, e.g., the formation and/or well bore characteristics of a subterranean formation actually encountered in the field and/or result of routine experimentation for process optimization or economic feasibility.

(Final Office Action at 5.) Applicants respectfully disagree and submit that the Examiner has not shown that *Sydansk* teaches or suggests every element as recited in Applicants' claims 6, 7, 11 and 12 as required under 35 U.S.C. § 103(a). MPEP § 2143.

As discussed in Section II.B above, *Sydansk* does not teach or suggest "a polymer consisting essentially of acrylamide and an acrylamide copolymer derivative." Therefore, as a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers, and since claims 6, 7, 11, and 12 depend from claims 5 and 10, these dependent claims are allowable for at least the same reasons given above. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants assert that claims 6, 7, 11 and 12 are patentable over *Sydansk* and thus request the withdrawal of these rejections.

**B. Rejection of Claims 15 and 16 over Sydansk and further in view of Burns**

The Examiner has rejected claims 15 and 16 under 35 U.S.C. 103(a) as being unpatentable over *Sydansk* and further in view of *Burns*. (Final Office Action at 5.)

With respect to these references, the Examiner states that:

It would have been obvious to one of ordinary skill in the art to which the invention pertains, to utilize an "AMPS" monomer as the "second species" and/or "a third species" monomer in the polymer component utilized in the fracturing and/or well treatment process of *Sydansk*, as taught by *Burns* et al, applied previously, which indicates that polymers comprising the "AMPS" monomer impart "excellent stability" to the well treatment composition, in order to similarly impart or realize "excellent stability" to the well treatment or fracturing composition utilized in the process of *Sydansk*, as well.

(Final Office Action at 5.) Applicants respectfully disagree and submit that the Examiner has not shown that this combination teaches or suggests every element as recited in Applicants' claims 15 and 16 as required under 35 U.S.C. § 103(a). MPEP § 2143.

As discussed in Section II above, neither *Sydansk* nor *Burns* teach or suggest "a polymer consisting essentially of acrylamide and an acrylamide copolymer derivative." Therefore, as a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers, and since claims 15 and 16 depend from claim 10,

these dependent claims are allowable for at least the same reasons given above. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants assert that claims 15 and 16 are patentable over *Sydansk* in further view of *Burns* and thus request the withdrawal of these rejections.

**IV. Remarks Regarding the Amendments of Claims 5-7, 10-12 and 20.**

Applicants note that amended claims 5-7, 10-12 and 20 do not present new issues requiring further consideration and/or search by the Examiner and thus are in condition for allowance. Applicants thus respectfully request that these claims be passed to issuance.

**V. No Waiver**

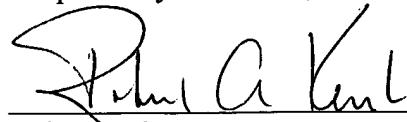
All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the *Sydansk* and *Burns* references. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements, such as, for example, any statements relating to what would be obvious to a person of ordinary skill in the art. The example distinctions discussed by Applicants are sufficient to overcome the anticipation and obviousness rejections.

**SUMMARY**

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicants believe that no additional fees are due in association with the filing of this response. However, should the Commissioner deem that any additional fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefor, and direct that any additional fees be charged to the Deposit Account of Halliburton Energy Services, Inc., No. 08-0300 for any underpayment of fees that may be due in association with this filing.

Respectfully submitted,



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